



## CLUB REPEATERS VE3TBR

Phone: 807-767-7661  
Listen: 146.820 MHz  
Txmit: 146.220 MHz  
Listen: 444.825 MHz  
Txmit: 449.825 MHz

## VE3YQT

Phone: 807-767-5492  
Listen: 147.060 MHz  
Txmit: 146.460 MHz

## VA3OLA

Listen: 53.050 MHz  
Txmit: 52.050 MHz

## VE3BCA

Listen: 145.450 MHz  
Txmit: 144.850 MHz

## WEEKLY BREAKFASTS

Saturdays 9:30 a.m.  
Blue Parrot Restaurant

## 2m MINI-NET

Mondays 7:00 p.m.  
VE3YQT Repeater.

## NEXT MEETING



7:30 p.m. Room 214  
McIntyre Building  
Confederation College

## SHORTWAVES

I can't believe how quickly this summer has passed by! My tower is up, the truck is a porcupine mobile complete with ham plates.

Matti, VE3EEI donated a binder full of old HI-Q's covering the early 1970's to the Club and it was fun going over them and "borrowing" a few items for future issues.

Over the past couple of months, I've managed to collect a lot of interesting amateur radio material. I would really, really appreciate it if you would keep your eyes and ears open and pass on any related material to yours truly. This is a club newsletter. I can't put any local area news in it, if I don't get any local area news from local area hams. To those who have been contributors, my heartfelt thanks. See the page 2 sidebar on how to correspond with the editor. There's lots of good-to-know "stuff" that I want to cover in HI-Q. Even the old-timers may learn a new thing or two. (Ed, you owe me an article on that marine incident.)

How many out there know what emergency numbers to dial if you can't access the 911 patch on a repeater? It's no fun frantically flailing through a phone book in a panic. I travel with an electronic data card. It's programmed with phone numbers, memos, schedules and has a built in clock with alarm. Another way is to take a few computer 3.5 inch diskette labels and write or type emergency phone numbers on them and then stick them to the back of your HTs, on top of your HF rigs, on your sun visor, etc. This way you are prepared to either dial the number through a repeater or tell someone else the number to dial.

If you hear an incident on a radio or scanner, listen to make sure that help is being provided. If you aren't sure and you can't directly help, place a call to the appropriate agency. Emergency numbers are usually listed on the first page of most phonebooks.

A radio operator, on the coast, picked up a **CW SOS** from a burning and sinking ship. That radio operator was the only one, in the entire world, who **heard** and **reported** the distress to a rescue centre. Seven sailors were pulled from the Atlantic, near the Azores and lived to sail again.—Ed.

**Club annual dues are to be in by 30 September 1996. Please get your cheque in the mail today.**

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## 1995/1996 LARC

### Founding President

P.J. (Pat) O'Shea, VE3FW  
1881-1972

In honour of the memory of our founding president, Mr. P.J. (Pat) O'Shea, the club call sign is VE3FW.

### Senate

Bill Roberts, VE3ARN  
Keith Fiske, VE3JQ  
Bert Lambert, VE3BKY  
Ray Greer, VE3CH  
Hugh Elliott, VE3EDW  
Bill Klemacki, VE3AJ

### Executive Board

<b>President:</b> T. Stewardson, VE3TKA	577-9439
<b>Vice Pres:</b> Ed Baumann, VE3SNW	622-1216
<b>Secretary:</b> Norm Bell, VE3XRC	577-9316
<b>Treasurer:</b> "Skip" Wright, VE3BBS	767-2307
<b>Directors:</b> Ian Mellis, VA3RIM	577-1628
Dave Horne, VA3DVE	344-9325
Don Bel, VA3DPB	473-5482
John Watson, VE3GTX	683-3199
<b>Mem.Sec:</b> John Watson, VE3GTX	683-3199
<b>Past Pres:</b> Mark Vukovich, VE3VUK	345-5856
<b>HI-Q Ed:</b> Robert Mazur, VA3ROM	344-7731

### Club and Newsletter Information

HI-Q is published by the Lakehead Amateur Radio Club, Inc., an Ontario registered non-profit corporation. The opinions expressed or implied in issues of HI-Q are those of the author. The LARC assumes no responsibility for the accuracy or the information submitted.

Material in HI-Q may be copied for non-profit use provided that credit is given to the source. Contributions related to amateur radio, especially those articles of interest to Northwestern Ontario amateurs are encouraged. Material can be submitted in WordPerfect® format or as a text file or via fax to: 807-345-2688 or via packet radio to: VA3ROM@VE3TKA or voice mail on the VE3TBR repeater to user 159 or via Email to: rmazur@tbaytel.net. Send material or dated announcements no later than the 20th of the month in which it is to appear.

To reduce production and distribution costs, advertising at the following per issued rates is accepted: full page—\$60.00, 1/2 page—\$40.00, 1/4 page—\$20.00 and 1/8 page—\$15.00. Reduced rates (1/3 off) are available upon receipt of advance payment for 10 issues (one full year). Send your ad copy and cheque (payable to the LARC) to the club address listed below. Advertising in HI-Q does not imply an endorsement or recommendation of the product or service by the LARC.

LARC membership fees are set for the year as follows: regular—\$30.00, associate—\$20.00, associate (attending ham classes)—\$80.00, student (attending school full-time)—\$15.00 and family—\$30.00 plus \$10.00 for each additional family member living at the same address. HI-Q is sent to all LARC members but only one copy is mailed to each address.

### Mailing Address

Please send all club correspondence to the following address: The Lakehead Amateur Radio Club, Inc., Suite 184, 1100C Memorial Avenue, Thunder Bay, ON, P7B 4A3, Canada.

### Internet Home Page

The LARC has an Internet web site home page that is sponsored by Len, VA3LEB. The Internet address is: <http://www.foxnet.net/larc>. Stop by for a visit and get your HI-Q electronically.

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of the executive that individual(s) have been operating outside the scope of their licence. After one or two verbal warnings, what can the Club do? What is Industry Canada's role now and in the future?

VE3JJA, Woody Linton suggested that peer pressure be tried. This problem arose in Winnipeg and was soon cleared up by peer pressure

only. VE3GTX, John Watson pointed out that at present there is nothing in our constitution that addresses this subject. The executive is looking for direction on this matter from the club membership.

**Adjournment:** moved by VE3XT, Bill Unger that the meeting be adjourned. **Carried.**

## 10 Metre Beacon

Fred, VE3FAL has established a 10 metre beacon at Sturgeon Bay, Ontario, southwest of Thunder Bay.

The call sign is VA3SBB (Sturgeon Bay Beacon) and broadcasts on 28.241 MHz in CW 24 hours a day. The output power is 5 watts using a Radio Shack HTX100 transceiver. This is feed to a A99 antenna (1/2 wave over 1/4 wave) that is up 30 feet. The CW is keyed by The Morse

Machine MM3 by Advanced Applications, Inc.

Beacons have been used for many years by hams across the globe to plot propagation patterns. Thus the reason for putting a beacon on the air. 73—Fred, VE3FAL.

If you monitor Fred's beacon, drop him a note or QSL card with details of the reception. Usually, the propagation opens up on 10 metres first, then moves up to 6 and then 2 metres. There are also 6 metre and 2 metre propagation beacons around the world.—Ed.

## WANTED! 2m Mini-Net Controllers

The LARC needs 4 volunteers to run the 2 metre mini-net on Monday nights starting at 7:00 p.m. No experience is required. Learn as you go. Only 1 night a month commitment required with 4 controllers.

If you are interested, contact Bob, VA3ROM @ 344-7731.

# Meeting Minutes

by Norm, VE3XRC

Minutes of a meeting of the Lakehead Amateur Radio Club held in Room 214 at Confederation College, Thunder Bay, Ontario on Thursday, June 13, 1996.

The meeting was called to order at 7:30 p.m. by the President VE3TKA, Terry Stewardson with 29 members and guests in attendance. VE3TKA introduced two guests, VE3JJA, Woody Linton from Kenora and VE3YTB, Tom Porett from Ardmore, PA.

## Minutes of the previous meeting:

The minutes of the previous meeting held May 9, 1996 were published in detail in the June edition of *HI-Q* and mailed to all members. **Motion:** moved by VE3BHN, Bob Gillespie and seconded by VA3BRN, Gerry Burney that the minutes be accepted as published. **Carried.**

## Correspondence: none

## Treasurer's Report:

Balance as of May 9, 1996:  
\$1,981.51

Expenses: 239.29

Income: 105.00

Balance as of June 13, 1996:  
\$1,847.30

**Motion:** moved by VE3BHN, Bob Gillespie and seconded by VE3GTX, John Watson that the Treasurer's Report be accepted. **Carried.**

## President's Report VE3TKA, Terry Stewardson:

"This will be my last year as President of the Lakehead Amateur Radio Club. After 4 years as President, I am getting burnt out. I would like to thank a lot of people for their help over the past years, the executive, *HI-Q* editor, VE3SNW, Ed Baumann, those who worked on

public service and technical projects. Thanks also to those who made the Club work."

VE3JJA, Woody Linton, who is biking across Canada said a few words. Woody is using amateur radio to pass traffic via 2m and HF to his wife Cathy, VE3JJS in Kenora. He started 26 days ago in Victoria B.C. and amateurs across the country have bent over backwards to support him. He has encountered snow in the mountains, coyotes on the prairie and black flies in Upsala. He has traveled 3500 km so far with the longest day being 237 km. It took him 4 hours to get up one hill in B.C. Woody stated that it had been a wonderful experience so far.

Field Day will be held at the summer resort of VA3RIM, Ian Mellis. VA3DVE, Dave Horne will climb trees to install antennas. There will be five rigs (one QRP) in operation. Instructions on how to get to Ian's camp were published in the June edition of *HI-Q*. Ian promises to screen in the front porch to keep out the blackflies.

Children's Festival is underway. VE3FLB, Rob Van Wyck made the arrangements and a full station has been set up including HF, VHF, RTTY and packet. VE3YQT had a good workout the first day.

Air Show, which is to be held September 8 and 9, is progressing. At a previous meeting, the Club agreed to provide the needed ground communications. VE3XRC, Norm Bell has the volunteer forms that are required for accreditation.

Canadian Jamboree '97: not a lot of activity on our part yet. We may be involved in three areas, internal communications, program activities and message centre. At least one full station will be set up. VA3GD, Pat Doherty suggested that we advertise in the District for volunteers who might want to come to Thunder Bay for such an event.

## Old Business:

Club Incorporation: to finish off a previous motion, the committee of VE3JAB, Bob Bishop, VE3UA, Jim O'Brien and VE3XRC, Norm Bell held a meeting and recommend that a procedural manual be created and said manual be referenced in the Club's bylaws. **Motion:** moved by VE3GTX, John Watson and seconded by VE3AJ, Bill Klemacki that the committee draft a first copy of the manual for presentation in the fall of 1996. **Carried.**

Antenna Season: it was reported at the meeting that there was still snow visible in the bush out at Sibley but as his antennas were once again up in the air and working, VE3AJ, Bill Klemacki officially closed antenna season with a "mighty" blast from the infamous horn.

## New Business:

Radio Amateurs of Canada happenings: VE3JAB, Bob Bishop had a few points of interest for the members. There is a situation developing where low earth orbiting satellites are asking permission to use portions of our 2m band. Also, out west, cars are being stopped by the RCMP and if there is a mobile radio in the vehicle, the police are requiring a copy of the licence for the radio. Make a copy of your licence and keep it in your vehicle.

Bob is six months away from completing his term as RAC Director for Northern Ontario. He is stepping down at the end of June 1996 and will recommend that VA3GD, Pat Doherty be appointed to complete his term. Bob thanked all of his assistant directors for their help.

Nominating Committee: as per our constitution, a nominating committee was struck at the June meeting. The following volunteered to form the nominating committee: VA3GD, Pat Doherty, VE3GTX, John Watson and VE3AJ, Bill Klemacki.

Self Policing and our role as a club: it has been brought to the attention

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# What Price Courtesy?

by Dave, VE3AVS

"BEEP!"—Sure, we all know it's a "courtesy beep, but some of the newcomers to our hobby (and even a few old-timers) tend to disregard this very important feature when operating on a repeater. Why is it there, anyway?

1. When you release the mike switch after transmitting, you should hear the beep from the repeater (unless the talker at the other end clobbers it!) This tells you the

repeater has received and retransmitted your side of the conversation.

2. So often, this summer, I've heard two people "doubling"—talking at the same time—because one or the other jumped in without waiting for the beep. Listening for the beep greatly reduces the risk of doubling.

3. Finally, when you jump in without hearing the beep, you make

it very difficult for a third party to access the repeater. In an emergency this could have disastrous results.

So wait for the beep. What's the big rush anyway? If your conversation is so urgent that you can't take time to hear it, then go to a simplex channel!

*With apologies to Sir Winston. "What Price Churchill?"—Ed.*

## Editorial

As the late separatist Premier Rene Levesque once said: "Okay, everyone take a valium."

By now, *everyone* must have heard about the LEO Low Earth Orbiting Satellite group's request for frequency assignments in both the 2 metre and 70 cm bands. The ARRL has been beating the kettle drums and issuing a cry to arms. Much ado about nothing, if you ask me.

What the LEO group really wants, most likely, is a chunk of 220 which the Americans lost most use of a few years back to commercial interests. By starting a ruckus in the amateur radio exclusive bands, the LEO group gets hams to do the lobbying work.

I really got a chuckle out of all the panic and frantic scrambling south of the border. Those fellows in the

LEO group are brilliant! Wave a red cape before the bull and then stand back and watch the fun begin. The FCC and ARRL beat each other senseless and the LEO group walks laughing all the way to the bank!

And, why the fuss about 440? We are secondary users and as have no claim to excluding other services from requesting the use of it, commercial or not. It's just not the FCC, IC, the ARRL and RAC involved. Japan, alone, has more hams than *all* North America. Our Asian compatriots make hams over here look, well, like amateurs.

Wayne Green (73 *publisher*) made mention of the fact that Japanese ham radio magazines are thick and heavy (literally) with technical, construction and procedures articles.

Most U.S. and Canadian amateurs don't do anything with or in the Amateur Radio Service and barely 20 percent belong to national organizations. The key word is *service* and not hobby. What do you want the Feds to protect, anyway? VHF and UHF amateur radio exclusive chit-chat channels?

Methinks that we doth protest too much. When 11 metres went to the public there was a howl of protest. Yet, hardly any hams used that band! Listen to the VHF amateur radio exclusive bands. See how much activity or lack of is happening.

If you aren't going to use the VHF bands and are not willing to join and support your national amateur radio organization, the LEO group will gladly fill the void.—Ed.

### Custom Callsign Plaques by Ian, VA3RIM

18-1/2" x 4-1/2" mahogany background with 2" high x 3/4" thick pine lettering with your callsign. Comes complete with hanging chain and hook **\$15.00** in Thunder Bay **\$20.00** outside Thunder Bay.

Make cheque payable to the LARC and mail to:  
1100C Memorial Avenue, Suite 184  
Thunder Bay, Ontario P7B 4A3.



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# The Story of DigiPeter Rabbit

by Frank, N2IGO

Once upon a time, in the far-away Kingdom of Radio, there was a peaceful valley called Hamville, inhabited by a group of rabbits. Hamville was originally settled by the Whiskey family, and the patriarch of that family was an old hare called Charlie Whiskey.

Charlie Whiskey was a farmer by trade. He came to the beautiful valley of Hamville when it was all open meadows. He saw the potential for farming the vacant land and over time he developed a thriving carrot plantation. Charlie Whiskey's carrot plantation was the envy of all the inhabitants of the kingdom of Radio. He succeeded year after year in producing a bumper crop of carrots. All the other residents of the kingdom came to Charlie for advice on planting carrots. Charlie would always tell them, "The secret's in developing a good ear." No, Charlie didn't have superior hearing, but he had developed a very special skill.

You see, he picked carrots with his ears. In fact, Charlie had worked hard at perfecting this skill and was able to harvest at better than 20 carrots a minute. All of Charlie's family learned to pick carrots with their ears. Soon they were all picking at better than 20 carrots a minute. Charlie was so proud of his special skill that he insisted that anyone who came to work at Hamville first show that he could pick carrots with his ears. Charlie would not give new settlers any land unless they could demonstrate to his foreman, Victor Echo, that they could pick at least 5 carrots a minute with their ears. When they could pick 13 carrots a minute, Charlie gave them more land to work. When they were able to pick carrots by ear at the rate of 20 a minute, Charlie made them full citizens of Hamville.

This process of learning to pick carrots with your ears went on for some time. In other parts of the Kingdom of Radio, other rabbits began to pick carrots by ear.

However, there were some noisy ducks, known as the Quackers, who lived in the community of Good Buddy. They used their mouths to pick their crops instead of their ears. They had much larger mouths than the rabbits and saw no need to use their ears. The rabbits all looked down on the Quackers. "We must always require ear harvesting skills for entry into Hamville," they said. "That way we will keep out those noisy Quackers." So, everyone who came to Hamville had to learn how to pick carrots by ear if they wanted to stay. Charlie Whiskey was adamant about that. "If you don't want to learn the skill of ear harvesting then go work in Good Buddy with the Quackers," he would say.

The years passed and new methods of farming were developed. These new methods were easier to learn than ear harvesting, especially for the animals who didn't have the big ears that the rabbits had. What's more, the new methods were just as efficient as ear harvesting. As time went by, fewer and fewer of the young animals were willing to learn the skill of ear harvesting. The population of Hamville began to dwindle. All the residents of Hamville were getting on in years. To make matters worse, there were new neighbors nearby who coveted the beautiful open farmland of Hamville. They wanted to come in and turn it into commercial uses like shopping centers. And worst of all, the pollution from the Quackers, the other Rabbits, and the Mice (known in Hamville as the QRM group) was having an adverse effect on farming in Hamville. The future looked bleak indeed.

Then, one day, a stranger called DigiPeter Rabbit came to Hamville. He was an educated rabbit who had studied at the School for Scientific Bunnies (SSB). He had majored in Farm Mechanics and knew all of the latest scientific agricultural methods. But, for all his education and know-

how, there was one thing that DigiPeter could not do. He could not master the skill of picking carrots with his ears. And, since he already knew how to pick carrots more efficiently with new scientific methods, he was not interested in learning. Charlie Whiskey was outraged. "What do you mean you won't learn to pick carrots with your ears? Why, we in Hamville have been picking carrots that way for 75 years! It's a tradition here. It shows that we're special and that we're better than the Quackers. If you don't have the desire to develop a good ear, then we don't want you here in Hamville."

But DigiPeter was adamant. He saw no reason to learn an obsolete skill just to stay in Hamville and he refused to even try. Charlie Whiskey took the matter to the Ancient Royal Rabbit League, which he had founded. The ARRL decreed that everyone in Hamville must learn to pick carrots with his ears or be banished. And so DigiPeter Rabbit left Hamville and founded his own village called Techietown.

Soon, all the young animals in the land of Radio were flocking to Techietown. But DigiPeter had his own entrance requirement. A good ear and a good memory were not enough for him. No one could stay in Techietown unless he could demonstrate technical knowledge, understanding and ability, and the desire to contribute to the advancement of Techietown.

DigiPeter encouraged all the residents of Techietown to experiment in the cultivation of new unexplored lands, never before farmed. DigiPeter showed them how to overcome pollution problems. He showed them how to use the land they had more efficiently. DigiPeter even perfected a method of farming which allowed a number of rabbits to farm the same land at the same time. While the residents of Hamville were picking 30 carrots a minute on a good

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day, in Techietown, harvests of 300 carrots a minute were possible. Using Digipeter's methods, and those developed by the other bright, young residents, Techietown soon became the most prosperous village in the Kingdom of Radio. This did not escape the notice of the Field Carrot Council, which governed the kingdom of Radio. To reward the residents of Techietown for their contributions to the kingdom, the Field Carrot Council gave Techietown more and more land to work, until its borders touched those of Hamville.

Meanwhile, Hamville was still plodding along as it always had, oblivious to the revolution in farming occurring around it. The old hares still picked carrots by ear. The Ancient Royal Rabbit League complained bitterly to the Field Carrot Council about all the new land it was giving to Techietown, but the population of Hamville continued to drop. When the Field Carrot Council gave 2 acres of Hamville property to Techietown, the residents of Hamville began, for the first time, to be genuinely concerned about their plight. Some even dared to ask the Ancient Royal Rabbit League to change its mind about the need to learn to pick carrots by ear to live in Hamville. "We need new blood here to fight off the Field Carrot Council," they said.

Charlie Whiskey, now in his nineties, was furious. "We have to maintain our standards. We don't need those smart young bunnies, we need rabbits skilled in our time-honored harvesting techniques. We need rabbits who are dedicated enough to the principles of Hamville to want to learn our methods. If a rabbit really wants to live here, he'll learn our ways. If he doesn't, we don't want him. You don't want those Quackers to move here, do you?"

But, by now, the residents of Hamville had seen the writing on the wall. Although they genuinely enjoyed picking carrots with their ears, they realized that there were

now other ways which yielded just as many carrots. And though they would probably continue to pick carrots by ear as they always had, they could no longer shun those bright young rabbits who chose a more modern method. A group of rabbits, led by an elder statesman rabbit named Elmer, who had once served in the government of the Kingdom of Radio, asked the Ancient Royal Rabbit League to change its policy. The League agreed and issued a decree that henceforth ear harvesting skills would not be required to become a resident of Hamville.

When Digipeter Rabbit heard of the decree, he sent envoys to Hamville with all the latest scientific discoveries, which he shared freely with the residents. The residents of Hamville seized upon the new knowledge and soon Hamville became revitalized. Its population began to increase as young rabbits were attracted to its bountiful open farmland. The Field Carrot Council, impressed by the renaissance in Hamville, did not take away any more of its land, but actually gave some new territory to Hamville. Everyone was amazed at the new vibrancy of Hamville. Charlie Whiskey, though sad that his beloved harvesting method was no longer in vogue, saw that his people were prospering and was glad. And to show that there were no hard feelings, Charlie Whiskey sent Digipeter Rabbit a packet of 73 carrots which he had picked himself—with his ears.

The residents of Hamville rejoiced and declared a festival to celebrate their new prosperity. Over the front door of the Hamville Festival they put a banner, which read: **"A bunny's worth is measured not by the skill of his ears but by what lies between them."** The residents of Hamville had learned an important lesson, indeed.

*Submitted by Jim, VE3UA, via digipeter packet rabbit radio. HI-Q welcomes all viewpoints no matter what you do with your ears.—Ed.*

## A Glossary of Little Known Q-Signals as Revealed to Wayne VA3WRL from The Radio Room of AA3LM

**QBE:** My spouse has me by the ear and says that I'm leaving the shack now.

**QBB:** I can't wait any longer; I must take a bathroom break!

**QTV:** I must stop for an hour; my neighbour's favourite TV program is on.

**QOG:** My station consists entirely of old tube gear.

**QRW:** Work is interfering with my playtime on the radio.

**QPS:** No. My fist is not bad. My paddles are sticking.

**QBT:** My brain is too tired to copy CW anymore.

**QDD:** Your melodic CW signal is being interfered with by those discordant digital signals. *I had to change this from QRD which is a legit Q-code dealing with a vessel's destination port.—Ed.*

**QET:** Wow! You are fast! I copied about every third letter that you sent.

# RAC Licence Plates For Ontario Are On The Way

Ontario Amateurs, thank you for your interest! The RAC call sign licence plate project is going ahead.

By the end of September the Ministry of Transportation outlets will be in a position to accept orders for licence plates imprinted with the red, black and white RAC logo. To obtain your set, the procedure is simple:

1. Send a cheque payable to RAC, in the amount of \$52.10 to the RAC Administrative Office. (Sorry, no credit cards on this project!)

2. In return, you will be sent a gift certificate to redeem at the nearest Driver and Vehicle Licence Issuing Office.

**NOTE:** You may send your payment to RAC at any time now, however, the gift certificates have yet to arrive from the Ministry of Transportation, so there may be a slight delay in receiving the paperwork from RAC. The gift certificates may be redeemed by the end of September for the RAC Logo Plates. We have to give the Ministry time to advise all their outlets that RAC is participating in their program and to have the blank plates manufactured.

3. You will be required to provide the Ministry office with appropriate proof of your ham licence.

4. **REMEMBER:** the plates must be imprinted with your unique call letters, so are not available immediately. Delivery of the plates will be within four to six weeks of placing your order with MTO.

It will also be possible to have the

RAC logo put on existing personalized plates, and for the same \$52.10, your vehicle will sport the RAC logo too. The gift certificates available from RAC are redeemable for these upgrades as well.

Customers will continue to be able to place orders for personalized and colour graphic plates by visiting any Driver and Vehicle Licence Issuing Office, calling the toll-free number 1-800-AUTO-PL8 (1-800-288-6758) or accessing one of the Ministry's ServiceOntario Kiosks.

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rachq@king.igs.net

## VA3GD New RAC Ontario North Director

The Board of Directors of Radio Amateurs of Canada has appointed Patrick G. Doherty, VA3GD, of Thunder Bay, to complete the remaining term of outgoing Ontario North Director Robert Bishop, VE3JAB.

Bob resigned from the post effective June 30, 1996 and Pat assumed his duties as interim Ontario North Director (covering postal codes K and P) on July 1.

An election by RAC members for RAC Directors in the Ontario North, Atlantic, Midwest and Pacific Regions will be held in October for two-year terms beginning January 1, 1997. A Call for Nominations appears in the July/August issue of The Canadian Amateur.

RAC extends its sincere gratitude

and appreciation to Bob Bishop for his dedication and many hours of hard work for Canadian Amateurs through his service on the RAC Board of Directors and on various committees over the past few years.

Pat, who is currently RAC HF Band Plan Coordinator and also Net Manager for the Northwestern Ontario ARES Net, was licensed in March 1974. As an active DX-chaser, he moved to 40 acres in the country in 1979 and his antenna farm now consists of monobanders on 10 through 40 metres spread over three towers with sloping dipoles off a 30-metre tower for 80 and 160 metres.

He has been active on satellites working OSCARS 10 and 13 for a number of years. He has traveled to the Pacific twice, first to the South Cook Islands (VE3HFS/ZK1) and then to Western Samoa (5W1ET) and the South Cook Islands (ZK1XM).

In 1993, Pat visited some Russian friends in the city of Irkutsk in Southern Siberia, where, along with Jim, VE3UA, they were the first Canadian Amateurs to be licensed in UA0-land where Pat held the call RA0S/VE3HFS.

Born in Thunder Bay and now living just outside the city in the village of Murillo, Pat was employed for 38 years by N. M. Paterson & Sons Limited, a grain elevator and steamship company, starting out as a junior clerk (messenger) and retiring as Vice-President and General Manager of the Steamship Division at the age of 56 in 1991.

"Being a director of RAC is exciting and of keen interest to me," says Pat.

"I would like to contribute to the advancement of the Canadian Amateur community, a payback for all the enjoyment I have had through Amateur Radio."

*These articles were obtained from the Internet RAC Reading Room. Bob did a lot of hard work for amateurs in this part of the world and has earned a "semi-retirement." From the 1970's HI-Q's I learned that it was 20 years ago that both Pat and Bob became newly licensed amateurs. Happy Anniversary!—Ed.*

# MFJ 259 SWR Analyzer

The MFJ 259 SWR analyzer provides the functions of an SWR meter, noise bridge, frequency counter, dip meter, capacitance and inductance meters and coax cable calculator. Frequency ranges from 1.8 MHz to 170 MHz. It's small, portable and runs on 8 AA cells or with a 12v DC adapter (not supplied).

MFJ advertises that many antenna companies, research labs and government agencies use their analyzers and also tout the one year "No Matter What" warranty.

I fried my analyzer (it was a bad ham day) and sent it back to MFJ. After a phone call from Jeff, the "No Matter What" warranty would cover it. What would have been a \$130 (U.S.) repair bill, ended up being only \$25 (Canadian) in postage.

Quoting from the manual: The MFJ 259 can be used to adjust or measure the following: antennas, tuners, amplifiers, balanced and unbalanced transmission lines, matching or tuning stubs, traps, tuned circuits, small capacitors, RF chokes and inductors and transmitters and oscillators.

## SWR and the MFJ 259

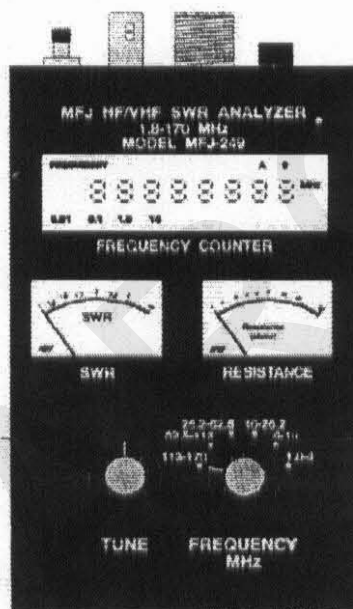
SWR is the ratio of load impedance to source impedance. The MFJ 259 measures the actual SWR and is not fooled by mixtures of reactive and resistance loads. The common misconception that 25 ohms of reactance and 25 ohms of resistance in a load will give a 1:1 SWR is absolutely untrue. The actual measured SWR in this condition is 2.6:1. *Impedance is the square root of the sum of the squares of reactance and resistance.*—Ed.

Another misconception is that changing a feedline length will change the SWR. **If line loss is low** it is perfectly acceptable to make SWR measurements at the transmitter end of the feedline no matter what the feedline length. However, as line losses increase and as the SWR increases, more error is

introduced into the SWR reading. The error causes the SWR to appear **better** (i.e. lower) than the actual SWR at the antenna!

If changing feedline length changes the SWR, one or more of the following **must** be true:

- the feedline is not 50 ohms
- your bridge is not set to measure 50 ohms
- the line losses are large
- the feedline is acting like part of the antenna system and radiating RF



If you are interested, the club has an MFJ 259 analyzer under the care of Bill, VE3AJ. You'll learn a lot about antennas, applications and theory and have fun building them.

## Practical Application: Estimating Line Losses

The MFJ 259 can measure feedline losses between 3 and 10 dB. It's easy to find the loss at a known frequency and then estimate the loss at a lower frequency.

To measure feedline loss:

1. Connect the feedline to the MFJ 259 antenna connector.
2. The other end of the feedline is either left unconnected or

terminated with a direct short.

3. Adjust the MFJ 259 frequency to the frequency desired and observe the SWR meter.

4. If the SWR is in the red then the loss is less than 3 dB. Increase the frequency until the meter reads 3:1. This is the 3 dB loss frequency.

5. If the SWR is in the black area of the meter, pick the closest SWR point and estimate the loss from the chart below.

SWR	LOSS
3.0:1	3.0 dB
2.5:1	3.6 dB
2.0:1	4.7 dB
1.7:1	5.8 dB
1.5:1	6.9 dB
1.2:1	10.3 dB

You can estimate the approximate loss at the operating frequency by remembering that the feedline loss in dB is **decreased** by 70% at **half** the frequency and **increased** by 140% at **twice** the frequency.

For example: You want to know the feedline loss at 28 MHz. At that frequency, the SWR needle is in the red uncalibrated portion of the meter. Increase the frequency until the meter needle falls on a calibration mark from the table. For this example, at 60 MHz the meter reads 3:1 SWR. Using the chart, you know that the signal loss is 3 dB. Since 28 MHz is about half of 60 MHz, you can multiply 3 dB by 0.7 (70%) which gives a loss of about 2.0 dB at 28 MHz.

By using a reference table for transmission lines, such as in the ARRL Antenna Handbook, which lists the transmission line loss per 100 feet for a specific frequency, you can calculate the length of your transmission line based on your calculated line loss with the MFJ 259 SWR Analyzer.—Ed.